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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,856	08/22/2003	Krishnan Tamareselv	200PP329A	1520
37535	7590	07/02/2007		
LEGAL DEPARTMENT LUBRIZOL ADVANCED MATERIALS, INC 9911 BRECKSVILLE ROAD CLEVELAND, OH 44141-3247			EXAMINER PEZZUTO, HELEN LEE	
			ART UNIT 1713	PAPER NUMBER
			MAIL DATE 07/02/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No:

10/646,856

Applicant(s)

TAMARESELVY ET AL.

Examiner

Helen L. Pezzuto

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) 35-71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-71 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/17/03, 3/8/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I, claims 1-34 and various ultimate species in the reply filed on 4/19/07 are acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 35-71 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/19/07.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. (US-841) or EP 0 444 791 A1 or EP 0 398 576 A2 or WO 96/35757.

US 5,639,841 to Jenkins et al. discloses a process of producing water-soluble polymers containing macromonomer mixtures, with application as thickeners. Prior art polymer is derived from 1-99.8 wt% of one or more nonionic, cationic, anionic, amphoteric monomers, up to 98.8 wt% of one or more monoethylenically unsaturated monomers, one or more monoethylenically unsaturated macromonomers, and up to 20 wt% of one or more polyethylenically unsaturated monomer (see abstract; col. 1, line 49 to col. 2, line 13).

Suitable nonionic, cationic, anionic monomer includes the instant amino-substituted vinyl monomer and hydrophobic nonionic monomer (col. 2, line 51 to col. 3, line 67) as defined in the present claims. Prior art macromonomer embraces the instant associate vinyl monomer and semihydrophobic vinyl surfactant monomer as expressed structurally in the present claims (col. 4, lines 1-51). Specifically, prior art macromonomer is defined by general formula (I) and (II), wherein  $R^1$  and  $R^{1'}$  is a monovalent residue of a substituted or unsubstituted simple or complex hydrophobe compound including those represented by formula

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(III), (IV) and (V) (col. 5, line 7 to col. 6, line 26). Hydroxyethyl acrylate disclosed within the scope of the instant hydroxyl-substituted nonionic vinyl monomer (col. 2, line 54). The presently recited crosslinking monomer is further taught as the polyethylenically unsaturated monomer (col. 6, lines 27-60). Furthermore, conventional chain transfer agents are disclosed (col. 8, lines 2230). Accordingly, it would have been prima facie obvious to one skilled in the art select the recited monomers among those expressively disclosed in the prior art, motivated by the reasonable expectation of success forming a thickener composition as taught in the reference. Once the general conditions of a claim are suggested, discovering the optimum or workable ranges would involve only routine skill in the art.

Similarly, EP-791 discloses polymeric thickeners for aqueous-based coatings comprising 2-20 wt% of at least one first hydrophobic monomer within the scope of the instant associate vinyl monomer and semihydrophobic vinyl surfactant monomer, 10-60 wt% an unsaturated ionizable monomer (i.e. N,N-dialkylamino alkyl (meth)acrylates and N,N-dialkylamino alkyl (meth)acrylamide), an ethylenically unsaturated nonionic monomer (i.e. alkyl (meth)acrylate),

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multifunctional monomer (i.e. crosslinking monomers), and chain transfer agent (see page 4, line 1 to page 6, line 19). Specifically, prior art first hydrophobic monomer is defined on page 4, lines 1-26, wherein X is an unsaturated moiety selected from (meth)acrylates, allyl ethers, vinyl ethers, urethanes, etc., within those expressed in the present claims. Hydroxyalkyl (meth)acrylates are disclosed as suitable monoethylenically unsaturated monomer used in the multistage polymer stage (page 6, lines 45-54). Similar to EP-791, EP-576 discloses polymer particles comprising two or more polymer stages, comprising 0.1 to about 55% by weight of hydrophobic monomer defined on page 2, lines 35-54 and page 4, line 34 to page 5, line 3, 10-60 wt% of an ionizable monomer (i.e. N,N-dialkylamino alkyl (meth)acrylates and N,N-dialkylamino alkyl (meth)acrylamide) (page 5, lines 4-12), an ethylenically unsaturated monomer (i.e. alkyl (meth)acrylate) (page 5, lines 25-44), multifunctional monomer (page 5, line 45 to page 6, line 8), and chain transfer agent (page 6, lines 9-14). Q-2, Cr-20, Al-20, and MA-20 were exemplified as suitable hydrophobic monomer within the terms of the instant associate vinyl monomer and semihydrophobic vinyl surfactant monomer (page 8).

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With the exception of EP-576, prior art references discussed above do not expressively exemplified a mixture of hydrophobic monomers, though disclose using at least one of the hydrophobic monomers. The references also, disclose range of carbon atoms within the scope of the hydrophobic end groups defined in the present claims. Since prior art are analogous art, contain teachings within the filed of applicant's endeavor, the examiner is of the position that the optimization of known result oriented variables within the skill of the art to solve a known problem is obvious and involves only routine skill in the art, absent evidence of unexpected results. Thus, rendering obvious the present claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

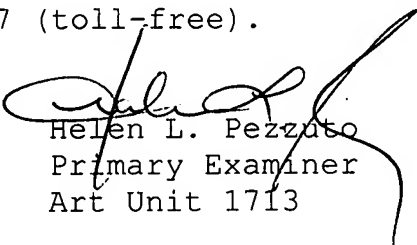
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization

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where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen L. Pezzuto  
Primary Examiner  
Art Unit 1713

hlp